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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/691,645	10/18/2000	Rudolf Maurer	15258-049600US	4394

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08/08/2002

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EXAMINER

SORKIN, DAVID L

ART UNIT	PAPER NUMBER
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1723

6

DATE MAILED: 08/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/691,645

Applicant(s)

MAURER ET AL.

Examiner

David L. Sorkin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9-19.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-19 is/are pending in the application.
- 4a) Of the above claim(s) 9 and 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 9-19 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 23 May 2002 is: a) ☐ approved b) ☒ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I in Paper No. 5 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Drawings

2. Receipt of proposed the drawing correction and/or the proposed substitute sheets of drawings, filed on 23 May 2002 is acknowledged. Applicant states that the proposed changes/sheets are in response to "the objection to the drawings as being incorrectly labeled". The examiner is not aware of have made such an objection. It is requested that applicant indicate where in the record such an objection was made. The proposed drawing change has been disapproved because it is not in the form of a pen-and-ink sketch showing changes in red ink or with the changes otherwise highlighted. See MPEP § 608.02(v). The examiner has been unable to find a difference between the proposed drawings and the original drawings.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
4. Claims 11-19 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to

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reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

5. While the original specification describes machining to make a subcombination mixer element which may be assembly to make a mixer, the specification does not describe machining to adjust the length of an assembled mixer. Therefore, in the context of claim 11 which is a claim to an assembled mixer, it is considered that the discussion of the function "to provide machining access to one of the reinforcement region and the intermediate elements including the cut-out for adjusting the length of the static mixer" is new matter. Also, the original specification nowhere suggests that "machining access" is provided when the mixer is assembled. Any cut-out in a given structural element is filled by protrusions of another element, when the mixer is assembled as claimed.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear what the "projecting parts" are being claimed to be separate from. Also, it is unclear how to reconcile the projecting parts being separate parts as required by claim 13, with the requirement in parent claim 11 that "continuous" surfaces "includ[e]" a protrusion. How can a "separate" part be included in a "continuous" surface.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

9. Claims 11-13 and 15-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Streiff (US 6,394,644). Regarding claim 11, Streiff ('644) discloses a static mixer comprising mixer elements (10a, 10c) arranged along a central axis, each having a circumferential reinforcement region (12); intermediate elements (10b, 10d), abutting the circumferential reinforcement region and forming in combination with the mixer elements a static mixer body of a preselected length with a periphery defined by the reinforcement region and the intermediate elements; and joints between the reinforcement region and the intermediate elements defining continuous joint surfaces and a seal between the reinforcement regions and the intermediate elements (see Fig. 5); the continuous joint surfaces of one of the reinforcement region and the intermediate

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elements including a cut-out portion (80,81) and the other one of the reinforcement region and the intermediate elements including a protrusion (82,83) extending into the cut-outs positioning the reinforcement region and the intermediate elements with respect to each other. Regarding the functional recitation "to provide machining access to the one of the reinforcement region and the intermediate elements including the cut-out for adjusting the length of the static mixer", one could disassemble the mixer and machine as one desires. Applicant is reminded that "apparatus claims cover what a device *is*, not what a device *does*" *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 15 USPQ 1525, 1528 (Fed. Cir. 1990) (emphasis in original). Regarding claim 12, the reinforcement regions are ring-shaped; cut-outs (80,81) are present in the reinforcement region; and a projecting part (82,83) protrudes from at least one of the continuous joint locations of at least one intermediate element, the projecting shape having a shape complementary to a shape of the cut-outs. Regarding claim 13, at least some of the projecting parts are separate parts fitted into cut-outs in the intermediate elements (see Figs. 6A-6C). Regarding claim 15, the mixer elements each comprise a gridwork of webs (32) which are arranged in layers oriented parallel to the central axis with the webs of adjacent layers crossing one another. Regarding claim 16, the webs of adjacent layers cross one another and enclose angles between 10 and 70 degrees (see col. 2, lines 63-66). Regarding claim 17, the elements are plastic (see col. 6, line 38). Regarding claim 18, the gridwork of webs is co-cast with the reinforcement regions (see col. 1, lines 62-65).

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10. Claims 11-13, 15, 16 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by King (US 4,614,440). Regarding claim 11, King ('440) discloses a static mixer comprising mixer elements (10, 12, etc.) arranged along a central axis, each having a circumferential reinforcement region (see Fig. 4); intermediate elements (11, etc.), abutting the circumferential reinforcement region and forming in combination with the mixer elements a static mixer body of a preselected length with a periphery defined by the reinforcement region and the intermediate elements; and joints between the reinforcement region and the intermediate elements defining continuous joint surfaces and a seal between the reinforcement regions and the intermediate elements (see Figs. 3 and 4); the continuous joint surfaces of one of the reinforcement region and the intermediate elements including a cut-out portion (see Figs. 3 and 4) and the other one of the reinforcement region and the intermediate elements including a protrusion (see Figs. 3 and 4) extending into the cut-outs positioning the reinforcement region and the intermediate elements with respect to each other. Regarding the functional recitation "to provide machining access to the one of the reinforcement region and the intermediate elements including the cut-out for adjusting the length of the static mixer", one could disassemble the mixer and machine as one desires. Applicant is reminded that "apparatus claims cover what a device *is*, not what a device *does*" *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 15 USPQ 1525, 1528 (Fed. Cir. 1990) (emphasis in original). Regarding claim 12, the reinforcement regions are ring-shaped; cut-outs are present in the reinforcement region; and a projecting part protrudes from at least one of the continuous joint locations of at least one intermediate element, the projecting shape

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having a shape complementary to a shape of the cut-outs (see Figs. 3 and 4).

Regarding claim 13, at least some of the projecting parts are separate parts fitted into cut-outs in the intermediate elements (see Figs. 3 and 4). Regarding claim 15, the mixer elements each comprise a gridwork of webs (13) which are arranged in layers oriented parallel to the central axis with the webs of adjacent layers crossing one another (see Fig. 3 and col. 3 lines 32-37 of King US 3,923,288 which is incorporated by reference). Regarding claim 16, the webs of adjacent layers cross one another and enclose angles between 10 and 70 degrees (see Fig. 3 and col. 3 lines 32-37 of King US 3,923,288 which is incorporated by reference). Regarding claim 18, apparatus claims are not limited by steps of making. See MPEP 2113.

11. Claims 11-13, 17 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Bokenkroger (US 1,857,348). Regarding claim 11, Bokenkroger ('348) discloses a static mixer comprising mixer elements (9) arranged along a central axis, each having a circumferential reinforcement region (11^a, 12^a); intermediate elements (others of 9), abutting the circumferential reinforcement region and forming in combination with the mixer elements a static mixer body of a preselected length with a periphery defined by the reinforcement region and the intermediate elements; and joints between the reinforcement region and the intermediate elements defining continuous joint surfaces and a seal between the reinforcement regions and the intermediate elements (see page 1, lines 73-99); the continuous joint surfaces of one of the reinforcement region and the intermediate elements including a cut-out portion (12^a) and the other one of the reinforcement region and the intermediate elements including a

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protrusion (11^a) extending into the cut-outs positioning the reinforcement region and the intermediate elements with respect to each other. Regarding the functional recitation "to provide machining access to the one of the reinforcement region and the intermediate elements including the cut-out for adjusting the length of the static mixer", one could disassemble the mixer and machine as one desires. Applicant is reminded that "apparatus claims cover what a device *is*, not what a device *does*" *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 15 USPQ 1525, 1528 (Fed. Cir. 1990) (emphasis in original). Regarding claim 12, the reinforcement regions are ring-shaped (see Fig. 3; cut-outs (12^a) are present in the reinforcement region; and a projecting part (11^a) protrudes from at least one of the continuous joint locations of at least one intermediate element, the projecting shape having a shape complementary to a shape of the cut-outs. Regarding claim 13, at least some of the projecting parts are separate parts fitted into cut-outs in the intermediate elements (see Figs. 3-5). Regarding claim 17, the elements are ceramic (see page 1, line 55-59). Regarding claim 19, first cut-outs are configured on one side of the reinforcement regions; and second cut-outs are configured on the other side of the reinforcement regions and displaced 90 degrees from the first cut-outs (see Figs. 3-5, page 1, lines 73-99).

Claim Rejections - 35 USC § 103

12. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Streiff (US 6,394,644) in view of Takeda et al. (US 4,892,379). In the mixer of Streiff ('644) discussed above with regard to claim 11 further includes cylinder (62) holding the mixer elements at the reinforcement region and the intermediate element together. However,

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it is not explicitly stated the cylinder is longitudinally slit and elastic sheet metal. Takeda ('379) teaches a longitudinally slit cylinder (5) of resiliently elastic sheet metal lamina. It is considered that it would have been obvious to one of ordinary skill in the art to have made the cylinder of Streiff ('644) be a longitudinally slit cylinder of resiliently elastic sheet metal lamina as taught by Takeda ('379) to provide the benefit of spring force to hold elements therein (see col. 3, lines 7-8).

13. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Streiff (US 6,394,644). Streiff ('644) further discloses cut-outs on opposite sides are the reinforcement region being displaced 90 degrees from each other. However, a plurality on each side is not disclosed. It is considered that it would have been obvious to one of ordinary skill in the art to have varied duplicated the cut-outs. See *St. Regis Paper Co. v. Bemis Co., Inc.* 193 USPQ 8, 11 (CCPA 1977) and *In re Harza* 124 USPQ 379 (CCPA 1960) regarding the obviousness of duplicating parts.

14. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over King (US 4,614,440) in view of Takeda et al. (US 4,892,379). In the mixer of King ('440) discussed above with regard to claim 11 a longitudinally slit cylinder is not disclosed. Takeda ('379) teaches a longitudinally slit cylinder (5) of resiliently elastic sheet metal lamina. It is considered that it would have been obvious to one of ordinary skill in the art to have held the elements of King ('440) in a longitudinally slit cylinder of resiliently elastic sheet metal lamina as taught by Takeda ('379) to provide the benefit of spring force to hold elements therein (see col. 3, lines 7-8).

15. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over King (US 4,614,440). It is considered that it would have been obvious to one of ordinary skill in the art to have made the elements of well known materials such as plastic or metal to suit a particular material being mixed.

16. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over King (US 4,614,440). The mixer of King ('440) discussed above with regard to claim 12, has first cut-outs configured on one side of the reinforcement regions and a second cut-outs configured on the other side. However, the cut-outs are not disclosed to be displaced by 90 degrees. Bokenkroger ('348) discloses a displacement of cut-outs on opposite side of 90 degrees (see page 1, lines 73-99). It is considered that it would have been obvious to one of ordinary skill in the art to have displaced the cut-outs by 90 degree because Bokenkroger ('348) teaches this results in easily assembly of elements (see page 1, lines 73-99).

17. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bokenkroger (US 1,857,348) in view of Takeda et al. (US 4,892,379). In the mixer of Bokenkroger ('348) discussed above with regard to claim 11 further includes cylinder (7) holding the mixer elements at the reinforcement region and the intermediate element together. However, it is not explicitly stated the cylinder is longitudinally slit and elastic sheet metal. Takeda ('379) teaches a longitudinally slit cylinder (5) of resiliently elastic sheet metal lamina. It is considered that it would have been obvious to one of ordinary skill in the art to have made the cylinder of Bokenkroger ('348) be a longitudinally slit

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cylinder of resiliently elastic sheet metal lamina as taught by Takeda ('379) to provide the benefit of spring force to hold elements therein (see col. 3, lines 7-8).

Response to Arguments

18. Applicant's arguments have been carefully read several times and considered in relationship to the drawing, specification, claims and prior art.

19. The examiner acknowledges observation of the generally ring-shaped surfaces 40a, 40b, and 20a, 20b as requested by applicant.

20. The examiner disagrees with applicant's assertions and conclusions concerning Ogasawara ('781) and King ('440). Applicant's reasoning is difficult to follow. It is not clear why applicant believes that machining the prior art references would fail to maintain "continuous joint surfaces", but that machining of the instant invention would maintain such surfaces. Perhaps more importantly, there is no claim limitation that corresponds to this method step of maintaining continuous joint surfaces after disassembling the claimed apparatus and machining it. Applicant's arguments depart from discussion of the claimed structure and instead involve discussion of a process of destroying the claimed apparatus and making a different apparatus. In the discussion of this process, while it is clear that the "continuous joint surfaces" of claim 11 (which include both the protrusions and the cut-outs as claimed) are to be machined, it is not clear what portions of the surface applicant intends to machine.

Conclusion

21. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L. Sorkin whose telephone number is 703-308-1121. The examiner can normally be reached on 8:00 -5:30 Mon.-Fri..

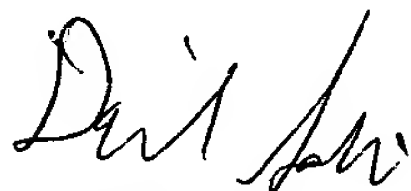
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on 703-308-0457. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

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David Sorkin

August 2, 2002



CHARLES E. COOLEY
PRIMARY EXAMINER